

3.0 Affected Environment and Environmental Consequences

This chapter describes the natural and human environment in the areas potentially affected by the TWE Project, and discloses the anticipated impacts from the proposed project, alternatives, and design options.

Each environmental or human resource section in this chapter contains subsections that discuss the regulatory framework (if applicable), data sources, analysis area, current (baseline) conditions, and impacts. Both the baseline conditions and impacts are discussed in the context of the four project regions described in Section 2.5, Alternative Transmission Line Routes and Ancillary Facilities.

Affected Environment

Baseline conditions are described in regional terms to provide an environmental setting. Where possible, resource data was mapped to indicate similarities and differences in resources intercepted by the various alternative corridors.

Environmental Consequences

The impact discussion includes more specific details regarding the resources that may be affected by the proposed action and alternatives. Direct, indirect, and cumulative impacts to the resources are discussed. Direct and indirect impacts are contained within this chapter. Cumulative impacts are discussed in Chapter 5.0.

The impact topics for each environmental or human resource are discussed in the following order:

- Northern and Southern terminal construction, operation, maintenance, and decommissioning. These facilities are common to all alternatives.
- Impacts common to alternative transmission line route alternatives and their associated components (e.g., access roads, transmission line tower sites, temporary work areas). This includes transmission line construction, operation, maintenance, and decommissioning. For each impact issue, agency stipulations and BMPs and applicant-committed design features (**Appendix C**) were considered at a local level to estimate the levels of project impact more accurately. If necessary, additional mitigation measures were recommended to further reduce or avoid impacts, and measure effectiveness described. Conclusion statements summarize the anticipated residual impacts.
- Quantified impact levels were tabulated for comparison by alternative within each project region, and impacts unique to each region described. A residual impact conclusion is provided for each major route alternative within each region to allow for comparisons among alternatives. Impact levels and comparisons among route variations, route connectors, and ground electrode sites also are provided, depending on regional location.
- The estimated impacts of design options are provided, based on available information.
- The effects of the No Action Alternative (continuation of current trends) are provided for each resource.

Within each resource section is an analysis of the direct and indirect impacts of these components based on the specific impacts that may occur, but a general approach and methodology for determining an impact parameter for direct impacts such as ground disturbance from construction (decommissioning would be similar) and operation (including maintenance) was developed and used for many resources.

Because the actual location of project facilities (e.g., access roads, transmission line tower sites, temporary work areas, terminal locations, and electrode bed sites) has not been established, reference lines have been established and TransWest has provided acreages of the disturbance necessary to develop transmission line segments according to assumptions (see **Appendix D**). For the purposes of analysis, a 250-foot-wide transmission line ROW was assumed to be centered on these reference lines. This 250-foot-wide ROW allows for the quantification of Project impacts and relative comparison between alternatives. During final engineering design, this 250-foot-wide transmission line ROW would be shifted as needed within the 2-mile transmission line corridor to address resource issues and facilitate compliance with design features and mitigation measures.

The impact parameter methodology used GIS analyses to characterize the resources in areas identified as potential disturbance locations (e.g., 250-foot-wide transmission line ROW and 2-mile transmission line corridor). The resource characterizations were applied as a ratio to the disturbance acreages by transmission line segment. A simplified example follows: Segment 1's 250-foot-wide transmission line ROW consists of 40 percent grassland and 60 percent shrubland, and TransWest identifies 10 acres of disturbance within the ROW during construction, then this methodology quantifies 4 acres of grassland and 6 acres of shrubland disturbed in the ROW during construction.

This same ratio approach was applied to the 2-mile transmission line corridor, and the two quantities were totaled for each segment. Additional 250-foot-wide transmission line ROW clearing was calculated as the remainder of the total ROW area after construction disturbance occurs. The impacts of segments comprising the regional alternatives identified in the EIS (see Section 2.5, Alternative Transmission Line Routes and Ancillary Facilities) were then summed. The result of this methodology is an estimate of the total disturbance to the specific resource by regional alternative.